STATE OF FLORIDA
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

SUNBREAK FARMS, LLC,

Petitioner,

vs.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT,

Respondent.
_____/

SFWMD No.

ERP No. 56-00111-S
(Application No. 180613-16

ST. LUCIE COUNTY'S
MOTION TO INTERVENE IN SUPPORT OF SFWMD

St. Lucie County, Florida ("County"), acting by and through its undersigned counsel, respectfully submits this motion for leave to intervene ("Motion") in this administrative proceeding pursuant to Section 403.412(5), Florida Statutes, and Rule 28-106.205, Florida Administrative Code ("F.A.C."). The County supports the Proposed Agency Action (dated May 24, 2019) that was issued by the Respondent, the South Florida Water Management District ("District" or "SFWMD"). In its Proposed Agency Action, the District announced its intent to deny the application ("Application") filed by the Petitioner, Sunbreak Farms, LLC., for a modification of an existing Environmental Resource Permit (ERP No. 56-00111-S).

In support of this Motion, the County states:

St. Lucie County

1. St. Lucie County is a political subdivision of the State of Florida. Its main office is located at 2500 Virginia Avenue, Ft. Pierce, Florida 34982. For the purposes of this proceeding, all legal papers and correspondence should be served upon the County's outside counsel, Mr. David S. Dee, and a copy provided to the County Attorney's Office in care of Ms.

Katherine Barbieri. The contact information for Mr. Dee is provided on the last page of this Motion. The contact information for Ms. Barbieri is provided in the Certificate of Service, which is attached to this Motion. The telephone number for the County Attorney's Office is (772) 462-1420.

Background Information

2. The Petitioner wishes to construct and operate a Type I Biosolids Management Facility ("Proposed Facility") in unincorporated areas of St. Lucie County and Indian River County, Florida. The Proposed Facility will accept and process "biosolids," which are defined by the Florida Department of Environmental Protection ("Department" or "FDEP") to mean the "solid, semisolid, or liquid residue generated during the treatment of domestic wastewater in a domestic wastewater treatment facility. . . ." (formerly known as residuals). See FDEP Rule 62-640.200(6), F.A.C. The Petitioner plans to receive and process Class B biosolids, other organic wastes (e.g., chicken and animal manure), and bulking agents to produce up to 80,000 dry tons per year of compost. The Application indicates that the compost will be produced in multiple Biosolids Composting Cells, which collectively will be approximately 80 acres in size. To produce 80,000 dry tons of compost each year, the Proposed Facility will need to receive at least 100,000 wet tons of biosolids each year, and each acre of the Biosolids Composting Cells will receive at least 1,250 wet tons of biosolids each year.

3. In its Application, the Petitioner seeks authorization to modify an existing Environmental Resource Permit (ERP No. 56-0011-S). The modification would allow the Petitioner to construct and operate a stormwater management system that would attempt to collect, retain, and infiltrate the stormwater and leachate generated by the Petitioner's composting activities.

4. The Proposed Facility and the associated stormwater management system will be constructed and operated on a parcel of land (the "Site") that is approximately 6,580 acres in size. The vast majority of the Site is located in St. Lucie County and the remainder is in Indian River County. The Site is in the watershed of the St. Lucie River, which the Florida Legislature has identified as one of the "critical water resources of the state." § 373.4595(1)(a), Florida Statutes. The Site also is in the watershed of the Indian River Lagoon ("Lagoon"), which the U.S. Environmental Protection Agency has designated as an "Estuary of National Significance" because the Lagoon is one of the most biologically diverse ecosystems in North America.

5. Surface water runoff, ground water flow, and other discharges from the Site will drain into the C-25 canal and then flow into the estuary of the St. Lucie River (the "Estuary") and the Lagoon. The Estuary and the Lagoon have been designated as "impaired" waters by the FDEP because the water quality in the Estuary and Lagoon fails to comply with the state standards for Class III surface waters, which were "established to protect fish consumption, recreation and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife." FDEP Rule 62-302.400(4), F.A.C. The poor water quality in the Estuary and Lagoon is caused in part by excessive amounts of nitrogen and phosphorus that drain into these waterbodies from upstream areas, including agricultural lands.

6. Given these water quality problems, the Florida Legislature established various programs and requirements for the protection of the St. Lucie River watershed and the Estuary. See, e.g., §§ 373.4595(1), (4), (5), and (8), Florida Statutes. Notwithstanding these efforts by the Legislature, and notwithstanding the efforts of the FDEP and SFWMD to implement the Legislature's directives, the Estuary and the Lagoon have experienced major algae blooms in recent years. These algae blooms have been unprecedented in their scope and severity, causing

large areas of the Estuary and Lagoon to be covered in thick mats of toxic blue-green algae. The impacts were devastating to the local ecosystems and dramatically reduced the use of the Estuary and Lagoon for fishing, boating, and other recreational purposes. The County declared a "State of Local Emergency" in 2016 and 2017 pursuant to Section 252.38(3), Florida Statutes, based on the County's determination that the algae in the local waterways posed a danger to health, life, property, and the economic well-being of St. Lucie County residents.

7. The County is concerned the Petitioner's proposed Type I Biosolids Management Facility will have significant adverse impacts on the County, its property, and the natural resources located in the County, including but not limited to the Estuary and the Lagoon. Accordingly, the County retained a professional engineering and consulting firm, CDM Smith, Inc. ("CDM Smith"), to assist the County with its review of the Petitioner's Application. CDM Smith's engineers and other professionals have extensive experience with biosolids, biosolids management facilities, and the protection of water resources. CDM Smith has completed its review of the Petitioner's Application and other submittals to the SFWMD, but CDM Smith still has unresolved questions and concerns about the Petitioner's proposed activities and their impacts on aquatic resources.

St. Lucie County's Statutory Right to Intervene

8. St. Lucie County is a political subdivision of the State of Florida. Pursuant to Section 403.412(5), Florida Statutes, St. Lucie County has standing to intervene in a formal administrative hearing by filing a verified petition asserting that the activity to be licensed or permitted will have the effect of impairing, polluting, or otherwise injuring the air, water, or other natural resources of the State. In the instant case, St. Lucie County asserts that the proposed activity to be permitted by the SFWMD will have such effects. The County's

assertions about these matters are supported by the affidavit testimony of Mr. Seth Nehrke, P.E., D.WRE, a professional engineer registered in the State of Florida. Mr. Nehrke's affidavit is attached hereto as Exhibit A and his testimony is incorporated herein by reference.

St. Lucie County's Substantial Interests

9. In addition to having standing in this case under Section 403.412(5), Florida Statutes, St. Lucie County also has standing because the proposed Type I Biosolids Management Facility and the proposed activities to be permitted by the SFWMD could reasonably be expected to adversely affect the County's substantial interests. As noted above, the Proposed Facility is located within the watershed of the St. Lucie River and the Site drains into the Estuary and the Lagoon. If the Proposed Facility is built, the surface water runoff from the Site, the groundwater draining from the Site, and the water overflowing or pumped from the 640-acre stormwater reservoir on the Site may cause or contribute to water quality violations in the Estuary and Lagoon. It appears that the Petitioner's existing SFWMD permits would allow the Petitioner to pump up to 190,000 gallons of water per minute (273,600,000 gallons per day) from the Site. Significant quantities of water reportedly have been discharged from the Site on certain occasions in the last few years. The discharges from the Site could reasonably be expected to increase the nutrient loading to the downstream waterbodies and thus exacerbate the water quality problems in the Estuary and Lagoon.

10. The County has four public parks that could be adversely affected by the Petitioner's proposed activities. First, the County owns and operates the Harbour Pointe Park on a 20-acre parcel of land that is bordered on two sides by the Estuary. The Harbour Pointe Park is adjacent to the mouth of Taylor Creek – i.e., the location where the surface water discharges from the Site will leave Taylor Creek and enter the Estuary. Second, the County operates

Wesley's Island Park on a State-owned island that is in the Estuary and relatively close to the mouth of Taylor Creek. Third, the County owns and operates the South Causeway Island Park, which has a lengthy border abutting the Estuary, relatively close to the mouth of Taylor Creek. Fourth, the County leases and operates Coon Island, another island in the Estuary.

11. All four of these properties (i.e., Harbour Pointe Park; Wesley's Island Park; South Causeway Island Park; Coon Island) are maintained and operated by the County. The County has removed exotic vegetation, provided shelters and amenities, and taken other steps to promote the public's use of these four properties. The County's goal is to enhance the environmental and social value of these properties so that they are an attractive destination for the County's residents and tourists, who use these properties for various purposes, including but not limited to fishing, boating, birdwatching, and picnicking.

12. The County's substantial interests in these four properties would be materially and adversely affected by the Proposed Facility if the groundwater and/or surface water discharges from the Site cause or contribute to water quality violations and toxic algae blooms in the Estuary. The County's residents and tourists will curtail their use of the County's properties if the Estuary again experiences a massive algae bloom that turns the water green, coats the shoreline with gelatinous mats of toxic blue-green algae, kills the fish and other aquatic creatures, and causes respiratory distress for humans in the vicinity of the Estuary. Under such circumstances, the County's substantial interests also will be adversely affected because the County will need to clean-up the shoreline bordering its four properties. The clean-up will require the County to expend its time, energy, money, and other resources. The clean-up will place the County's employees and/or contractors at risk because they will be exposed to the algae, dead fish, and other dead and dying organisms along the shoreline of the Estuary.

Compliance with Rule 28-106.205, F.A.C.

13. As noted above, the County wishes to intervene in this proceeding in support of the Proposed Agency Action (dated May 24, 2019) issued by the Respondent, the SFWMD.

14. Pursuant to Rules 28-106.205(2)(e) and 28-106.204(3), F.A.C., the undersigned counsel has conferred with the attorneys representing the Petitioner and the SFWMD, respectively. The SFWMD's attorney has authorized the undersigned counsel to state that the SFWMD has no objection to this Motion and the County's request to intervene. Petitioner's attorney has instructed the undersigned counsel to state that the Petitioner opposes this Motion and will file a written objection to this Motion.

Relief Requested

WHEREFORE, St. Lucie County respectfully requests the District to grant this Motion and thereby allow the County to intervene in this administrative proceeding.

Respectfully submitted this 17th day of June, 2019.

GARDNER, BIST, BOWDEN, BUSH, DEE, LAVIA & WRIGHT, P.A.

David S. Dee
Florida Bar No. 281999
ddee@gbwlegal.com
John T. LaVia, III
Florida Bar No. 853666
jlavia@gbwlegal.com
1300 Thomaswood Drive
Tallahassee, FL 32308
Phone: (850) 385-0070
Fax: (850) 385-5416
ATTORNEYS FOR ST. LUCIE COUNTY

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been filed by electronic mail with the South Florida Water Management District, in care of the Office of the District Clerk (Clerk@SFWMD.gov), 3301 Gun Club Road, West Palm Beach, FL 33406, and copies were served electronically this 17th day of June, 2019, to:

Katherine Barbieri (Barbierik@stlucieco.org)
St. Lucie County Attorney's Office
2300 Virginia Avenue
Fort Pierce, Florida 34982

John L. Wharton (jwharton@deanmead.com)
Dennis Corrick (dcorrick@deanmead.com)
215 S. Monroe St., Suite 815
Tallahassee, FL 32301

Susan Roeder Martin (SMartin@SFWMD.gov
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

By: _____
Attorney

EXHIBIT A TO ST. LUCIE COUNTY'S MOTION TO INTERVENE

(Affidavit of Seth M. Nehrke, P.E., dated June 17, 2019)

STATE OF FLORIDA
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

SUNBREAK FARMS, LLC,

Petitioner,

vs.

SFWMD No.

ERP No. 56-00111-S
(Application No. 180613-16)

SOUTH FLORIDA WATER
MANAGEMENT DISTRICT,

Respondent.
_____/

AFFIDAVIT OF SETH M. NEHRKE, P.E.

STATE OF COLORADO

COUNTY OF ADAMS

I, SETH M. NEHRKE, being duly sworn, deposed and state as follows:

1. I am over eighteen (18) years of age.

2. This affidavit is based upon my personal knowledge of the facts and circumstances discussed herein.

3. This affidavit has been prepared at the request of St. Lucie County to supplement the County's motion to intervene in this proceeding in support of the South Florida Water Management District ("SFWMD").

4. I received a Bachelor of Arts degree in Environmental Studies from the State University of New York at Binghamton in 1996, a Bachelor of Science degree in Civil Engineering from Colorado State University in 2001, and a Master of Science degree in Civil Engineering from Colorado State University in 2002. I am a registered Professional Engineer in Florida, Colorado, Georgia, Louisiana, Mississippi, and Texas. Based on my training and

experience, in 2012 I was admitted as a Diplomate, Water Resources Engineer, by the American Academy of Water Resources Engineers. I am employed by CDM Smith Inc. (CDM Smith (Camp Dresser & McKee (CDM) prior to 2011)), an international engineering and consulting firm, where I serve as a Principal, Water Resources Engineer. At CDM Smith I have worked a wide range of projects involving water quality issues, including stormwater management planning, modeling, design, construction, and operations. To date I have served as the Project Engineer or Project Manager on more than 100 projects, which have been located across the United States and overseas, in places as diverse as Australia, Puerto Rico, and Tanzania. While employed by CDM Smith, I spent13.5 years living in Florida, where I gained extensive experience working with applicants seeking the issuance of Environmental Resource Permits ("ERP") from the Florida Department of Environmental Protection ("FDEP") or a water management district.

5. CDM Smith serves as a consulting engineer to the County. At the request of St. Lucie County, CDM Smith reviewed an application and supporting materials (collectively, "Application") that were filed with the SFWMD by Sunbreak Farms, LLC ("Sunbreak Farms") on or about June 13, 2018. In its Application, Sunbreak Farms requested a modification of the Environmental Resource Permit (ERP No. 56-00111-S) that the SFWMD previously issued for the construction and operation of the stormwater management system used by Sunbreak Farms. More specifically, Sunbreak Farms requested authorization to construct and operate a stormwater management system that will serve "biosolids composting cells" – i.e., areas where Sunbreak Farms will receive and process biosolids (i.e., human wastewater residuals) that will be transported to Sunbreak Farms' property from domestic wastewater treatment plants. The biosolids composting cells will be approximately 80 acres in size. The Application indicates, and my professional experience confirms, that Sunbreak Farms must obtain a modification of the

existing ERP permit (ERP No. 56-00111-S) from the SFWMD before Sunbreak Farms can begin to build the composting cells and associated stormwater management systems on its property.

6. On three separate occasions the SFWMD requested Sunbreak Farms to provide additional information concerning its Application and the proposed stormwater management facilities. Each time Sunbreak Farms provided some, but not all, of the information requested by the SFWMD.

7. Acting on behalf of CDM Smith and at the request of St. Lucie County, I reviewed each one of Sunbreak Farms' responses to the SFWMD's requests for additional information, and then I prepared letters to the SFWMD concerning the deficiencies in the Application, as supplemented. My letters to the SFWMD are attached hereto and incorporated herein by reference. See Attachment "A" (letter from CDM Smith dated August 27, 2018), Attachment "B" (letter from CDM Smith dated December 27, 2018) and Attachment "C" (letter from CDM Smith dated April 18, 2019). To the best of my knowledge and belief, the statements in my letters (Attachments "A", "B", and "C") are accurate and correct.

8. The Application includes a copy of a Domestic Wastewater Facility Permit (FDEP Permit No. FLA979830) that was issued by the Florida Department of Environmental Protection to Sunbreak Farms. The FDEP permit describes Sunbreak Farms' project as a "new, type I Biosolids Management Facility with a permitted Class AA compost production of approximately 80,000 dry tons per year." The Application and the FDEP permit state that vegetative waste will be mixed with biosolids in a 3:1 ratio to produce compost. The FDEP Permit also states that the solids content of the biosolids may range from 1.75% for liquid biosolids to 17.75% for dewatered "cake."

9. Based on the information provided by Sunbreak Farms, I calculate that Sunbreak Farms will need to receive 20,000 dry tons of biosolids and 60,000 dry tons of vegetative waste

each year to produce 80,000 dry tons per year of compost. If I conservatively assume the biosolids will have a solids content of 20%, I calculate that Sunbreak Farms will need to receive at least 100,000 wet tons of biosolids each year to produce the permitted quantity of compost. Stated differently, the 20,000 dry tons of biosolids used by Sunbreak Farms is equal to 100,000 wet tons of biosolids with a solids content of 20%. Since the 100,000 wet tons of biosolids will be delivered to and processed on 80 acres of land used for "biosolids composting cells," I calculate that each acre of the composting cells will receive at least 1,250 wet tons of biosolids each year (assuming uniform distribution across the cells). These calculations are intentionally designed to be conservative – i.e., they underestimate the amount of biosolids that will need to be transported and delivered to Sunbreak Farms to produce 80,000 dry tons per year of compost.

10. For the reasons set forth in my letters (Attachments "A", "B", and "C"), I have concluded that the liquids (i.e., "leachate") emanating from or rainfall that comes into contact with the biosolids in the composting cells at Sunbreak Farms will drain down from the composting cells into the groundwater. These liquids then will flow laterally to surface waters, which ultimately drain to downstream waterbodies that are "impaired" – i.e., the waterbodies are not in compliance with Florida's water quality standards because of the nutrients (e.g., nitrogen and phosphorus) and other pollutants in those waterbodies. There also are other plausible scenarios where leachate from the composting cells will reach downstream waterbodies. Since the biosolids delivered to Sunbreak Farms will contain nutrients and other pollutants, it is my professional opinion that the activity to be licensed and permitted in this proceeding will have the effect of impairing, polluting or otherwise injuring the water and other natural resources of the state.

Further, Affiant sayeth naught.

Seth M. Nehrke

STATE OF COLORADO

COUNTY OF Denver

Sworn to and subscribed to before me on June 17th, 2019, by Seth M. Nehrke, who is ✓ personally known to me or ___ produced _____ as identification.

XANDRIA KAISER
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20184042132
MY COMMISSION EXPIRES OCT 29, 2022

Xandria Kaiser

Xandria Kaiser

Notary Public

State of Colorado

My Commission Expires: October 29, 2022

My Commission No.: 20184042132

ATTACHMENT A TO AFFIDAVIT OF SETH M. NEHRKE, P.E.

(CDM Smith letter dated August 27, 2018 to SFWMD)

CDM Smith

August 27, 2018

Gary R. Priest, P.E.
Okeechobee Regulatory Office
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Subject: Sunbreak Farms Biosolids Composting Cells
Application to Modify SFWMD ERP No. 56-00111-S

Dear Mr. Priest:

At the request of St Lucie County, CDM Smith reviewed the application and supporting materials (collectively, Application) filed on June 13, 2018 by Sunbreak Farms for a modification of South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP) No. 56-00111-S. After an initial review of the Application, the SFWMD issued a request for additional information (RAI) on July 13, 2018. CDM Smith has reviewed this RAI, along with the RAI response package (RAI Response) dated August 13, 2018 that was prepared by Sunbreak Farms.

In its Application, Sunbreak Farms requests authorization to construct approximately 80 acres of Biosolids Composting Cells (Project) that will be used to receive and process biosolids from domestic wastewater treatment plants. The FDEP issued a "Domestic Wastewater Facility Permit" (No. FLA9799830) that describes the Project as a "new, Type I Biosolids Management Facility with a permitted Class AA compost production of approximately 80,000 dry tons per year." The Application indicates that vegetative waste will be mixed with biosolids in a 3:1 ratio to produce compost. Thus, the production of 80,000 dry tons per year of compost will require the delivery and management of approximately 20,000 dry tons per year of biosolids. The FDEP permit indicates the solids content of biosolids may range from 1.75% for liquid biosolids to 17.75% for dewatered "cake." If we conservatively assume the biosolids will have a solids content of 20%, we calculate the Project will receive at least 100,000 wet tons of biosolids each year, and each acre of the composting cells will receive at least 1,250 wet tons of biosolids each year.

Based on our review of the Application and RAI Response, CDM Smith has concluded that the Application currently does not provide reasonable assurance of compliance with the applicable standards for the issuance of an ERP modification. For this reason, we believe the SFWMD should request additional information from Sunbreak concerning the proposed Project.

In addition to the items of concern outlined in our letter dated July 11, 2018, we offer the following additional observations and questions with respect to the Project and the proposed stormwater management system:

1) The revised "Drainage Calculations" repeatedly reference the Florida Department of Agriculture and Consumer Services (FDACS) Best Management Practices (BMPs) and the farm's compliance with said BMPs.

    a. These BMPs are geared towards controlling runoff from traditional agricultural operations, not the runoff from a "Biosolids Management Facility" that is receiving

large quantities of domestic wastewater residuals, pursuant to a "Domestic Wastewater Facility Permit."

b. Compliance with BMPs in the farm fields does not create any presumption of compliance with regard to the delivery, processing, and management of biosolids in the proposed composting areas. Compliance with the presumptive criteria that these agriculturally focused BMPs are based upon should not be misconstrued to imply that the proposed biosolids composting activities will result in no net degradation of the environment.

2) The Application and RAI Response state that the groundwater levels on the farm are manipulated via pumping. The RAI Response states that groundwater levels will be maintained below the invert of the V-ditch that will be excavated on the site and then used to provide retention for the runoff from the composting windrows.

a. Lowering the groundwater table will promote infiltration during the period of drawdown.

b. Lowering the groundwater table will simply delay, but will not eliminate, the influx into the groundwater of nutrients and other contaminates associated with the biosolids.

c. The Application and RAI Response fail to acknowledge that any seepage will occur from the V-ditch into the groundwater. As a result, these documents do not quantify the seepage from the V-ditch into the groundwater table, which flows into onsite and offsite canals.

d. Because the Application and RAI Response fail to acknowledge the seepage from the V-ditch into the groundwater, these documents fail to analyze the impacts on water quality that may occur in the groundwater onsite, as well as the impacts on surface water on and off of the site. For the same reasons, the Application and RAI Response fail to analyze the impacts on water quality that may occur when the reservoir discharges to offsite waters.

e. The Application and the RAI Response do not demonstrate that nutrients (and other potential pollutants of concern) in the seepage from the composting areas will be managed to avoid offsite impacts in impaired waters.

3) The RAI response package continues to reference retention as the proposed methodology of stormwater management; however:

a. Neither infiltration capacity nor recovery time is addressed in the Application or the RAI Response. Review of the SFWMD digital soils coverage shows the majority of the site is classified as hydrologic soil group "D", which is poorly drained. It has been stated by the applicant that the soil has been scarified using "deep rippers" that cut into and through the compacted soils onsite. Further, the applicant proposes to excavate the V-ditch at least 24" below ground surface, thus cutting through any compacted soils in the composting areas. The applicant's plans indicate the V-ditch will be 2 feet deep and 16 feet wide, and will extend the entire length of the composting area, thus providing a large conduit for infiltration into the groundwater. It is requested that the applicant provide additional quantitative information (i.e., geotechnical data) on the proposed retention system and site infiltration capacities to demonstrate compliance with SFWMD recovery requirements.

b. Given the applicant's statement that there is full retention of the 100-year 72-hour storm and no infiltration, other than evaporation, how will storage recovery for the retention occur if there is no discharge or no infiltration? The applicant should demonstrate that the system is capable of infiltrating the retention volume in accordance with applicable regulatory criteria to confirm that storage for subsequent events is available. It should be noted that the demonstration of infiltration would increase the potential for seepage flow with nutrients into the groundwater and surface waters.

4) The application states that the stormwater system will be self-contained (retention) and will exceed the capacity of the onsite reservoir only during storms larger than the 100-year 72-hour design storm event. This implies a potential increase in infiltration and seepage into the groundwater system and potentially into surface waters.

a. The applicant has repeatedly acknowledged that the water levels in the onsite canals are routinely manipulated to raise or lower the groundwater levels in the fields. In this manner, the applicant has confirmed that the area groundwater system is directly connected to the canals onsite. Indeed, the applicant's RAI Response proposes to reduce the water levels in the onsite canals to depress the onsite groundwater levels beneath the V-ditches.

b. This direct surface water to groundwater connection allows for the transport of nutrients and other potential parameters from the proposed V-ditch into the onsite canals. It also allows for the transport of nutrients into offsite canals, when the water level in those canals is lower than the onsite groundwater table.

c. The discharges from the site flow to the C-25 Canal and ultimately discharge to the Indian River Lagoon, which is impaired, an Outstanding Florida Water, and an Estuary of National Significance.

Conclusions

As noted above, CDM Smith believes the applicant has not provided reasonable assurance of compliance with the applicable SFWMD requirements for the approval of the proposed ERP modification. At a minimum, we believe the SFWMD should issue a second RAI requesting the applicant to provide additional information concerning the proposed Project. In addition, we would recommend the following:

(a) The system should be designed to prevent a direct connection between the stormwater in the biosolids composting areas and the groundwater (e.g., lined composting cells).

(b) The applicant should demonstrate that the proposed system will provide 100-year 72-hour design storm retention volume and storage recovery with full retention.

(c) It is imperative that the applicant develop and implement a surface and groundwater monitoring system to detect the potential migration of nutrients and other contaminants to offsite waters. The applicant's Project involves the construction of new facilities that have "high pollutant generating potential." As designed, the Project will discharge through the V-ditch to groundwater that drains into surface waters, which ultimately drain to impaired waters. The applicant has represented that the proposed Project will not degrade the water quality in the on-site canals or reservoir, or degrade the water quality in any off-site waterbody, because all of the water in the composting cells will be

retained. The monitoring plan should be designed and implemented to determine whether the proposed system actually performs as proposed.

We trust the SFWMD will establish appropriate permit conditions that require the applicant to comply with the applicant's representations concerning the design, construction, operation, and maintenance of the proposed Project.

We appreciate the opportunity to provide comments on this Project. Please contact me at (954)-547-0149 if you have any questions or comments to discuss.

Sincerely,

Seth M. Nehrke, P.E., D.WRE

Principal Water Resources Engineer

CDM Smith

Cc: St Lucie County

Indian River County

ATTACHMENT B TO AFFIDAVIT OF SETH M. NEHRKE, P.E.

(CDM Smith letter dated December 27, 2018 to SFWMD)

CDM Smith

December 27, 2018

Gary R. Priest, P.E.
Okeechobee Regulatory Office
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Subject: Sunbreak Farms Biosolids Composting Cells
Application to Modify SFWMD ERP No. 56-00111-S
Response to SFWMD RAI #2

Dear Mr. Priest:

At the request of St Lucie County, CDM Smith Inc. reviewed the application and supporting materials (collectively, "Application") filed on June 13, 2018 by Sunbreak Farms for a modification of the South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP) No. 56-00111-S. After an initial review of the Application, the SFWMD issued a request for additional information ("RAI") on July 13, 2018. CDM Smith has reviewed this RAI, along with the RAI response package ("RAI Response") dated August 13, 2018 that was prepared by Sunbreak Farms. Subsequently, the SFWMD issued a second RAI on September 14, 2018. CDM Smith has reviewed this second RAI, along with the second RAI response package dated December 5, 2018 that was prepared by Sunbreak Farms.

In its Application, Sunbreak Farms requests authorization to construct approximately 80 acres of Biosolids Composting Cells (the "Project") that will be used to receive and process biosolids from domestic wastewater treatment plants. The FDEP issued a "Domestic Wastewater Facility Permit" (No. FLA9799830) that describes the Project as a "new, Type I Biosolids Management Facility with a permitted Class AA compost production of approximately 80,000 dry tons per year." The Application indicates that vegetative waste will be mixed with biosolids in a 3:1 ratio to produce compost. Thus, the production of 80,000 dry tons per year of compost will require the delivery and management of approximately 20,000 dry tons per year of biosolids. The FDEP permit indicates the solids content of biosolids may range from 1.75% for liquid biosolids to 17.75% for dewatered "cake." If we conservatively assume the biosolids will have a solids content of 20%, we calculate the Project will receive at least 100,000 wet tons of biosolids each year, and each acre of the composting cells will receive at least 1,250 wet tons of biosolids each year.

Based on our review of the Application and RAI Responses, CDM Smith has concluded that the Application currently does not provide reasonable assurance of compliance with the applicable standards for the issuance of an ERP modification. For this reason, as set forth below in our conclusions, we believe the SFWMD should request additional information from Sunbreak concerning the proposed Project.

In addition to the items of concern outlined in our previous letters dated July 11, 2018, and August 27, 2018, we offer the following additional observations and questions with respect to the Project and the proposed stormwater management system:

RAI Item #1 – this RAI requested a pre vs post nutrient analysis

Review of the RAI Response directs the reviewer to a BMPTRAINS Watershed Characteristics V 8.6 spreadsheet. We have the following comments:

- The BMPTRAINS tool is designed to determine surface runoff loads of nitrogen and phosphorus, and does not consider the implications of the nitrogen and phosphorus infiltrating through the soil to the surficial aquifer, and whether it will migrate to adjacent surface waters through groundwater discharge.

- The Directly Connected Impervious Area (DCIA) percentage is set at 0% for existing and 100% for proposed.
    - The result of this (combined with the increase in Curve Number from 89 to 98) is an increase in annual runoff of 259%, from 80.5 ac-ft/yr to 288.5 ac-ft/yr.
    - Examination of the increase in loadings reveals a significant increase in post-condition loadings:
        - Nitrogen loads increased 5313% from 262.95 kg/yr to 14233.15 kg/yr.
        - Phosphorus loads increased 4738% from 58.84 kg/yr to 2846.63 kg/yr.

- The applicant is assuming 98% removal efficiency with respect to both Nitrogen and Phosphorus – this is a very high removal rate, and is based on complete retention of all runoff.

- The conclusion as shown on the final page of the spreadsheet is that even with the elevated reduction rate of 98% the applicant is still increasing loading:
    - Nitrogen discharge increased 30% from 262.95 kg/yr to 341.6 kg/yr – it should be noted that this assumes zero treatment and zero removal in existing conditions, which may not be correct.
    - Phosphorus discharge increased 16% from 58.84 kg/yr to 68.32 kg/yr – it should be noted that this assumes zero treatment and zero removal in existing conditions, which may not be correct.

- Even assuming that a 98% removal rate is attainable, the nutrients that are "removed" are being infiltrated into the area groundwater table. This is a potentially significant increase in groundwater nutrient loading, which could migrate to adjacent canals and receiving waters.

RAI Item #2 – this RAI requested the operational monitoring method and plans for the groundwater table in the vicinity of the composting areas

Review of the water table management protocol resulted in the following observations:

- The protocols outlined in Section A to maintain the water table a minimum of 3' below the cells seems reasonable, however this may be greater than allowable across the site drawdown. This can also potentially induce legacy nutrients and other parameters out of the system.

- Section B is somewhat confusing, as it assumes that if water levels in area ditches is lowered it will result in acceptable water levels below the cells.
    - It is recommended that Section B be modified to require that water levels in the vicinity of the cells be confirmed via the measuring devices to be installed as detailed in Section A.

- It is recommended that Section C (during composting procedures) be strengthened by adding a time table for which water levels must be drawn down below target levels after the target is exceeded, otherwise composting activities must be halted or secondary measures must be employed. This will provide protection for when the measures outlined in Section B are not sufficient.

- Lastly, it should be noted that reducing groundwater levels in the vicinity of the retention system will serve to increase onsite retention.
    - While the reduced groundwater table increases the potential that some nutrients will be stored in the soil that would have previously entered the groundwater table, when groundwater levels are increased in composting conditions, the potential of remobilizing these nutrients is greater.

RAI Item #3 – this RAI requested a water quality monitoring plan and reporting schedule

For this response the applicant's engineer, Engineering Design & Construction, Inc. (EDC), engaged Dean Mead, attorneys at law to develop a response.

- The Dean Mead letter identifies the main concern is not the application of the biosolids fertilizer, but rather the actual act of composting – we would agree with this, however recent studies have brought into question the practice of land application of biosolids fertilizers.

- The Dean Mead letter states that nearly 90% of annual rainfall events (and the runoff) will be stored in the V-ditch, inside a containment berm.
    - This water will be infiltrated via the V-ditches and into the groundwater table, which is directly connected to the area surficial ditch system.

- The Dean Mead letter states that the system does not discharge to surface waters.
    - We know this is not always the case, as Sunbreak Farms discharges to the Minute Maid canal, and have done so within the past year.

- The Dean Mead letter states that the DEP permit allows that the permitted activities do not warrant groundwater monitoring.
    - The permit for Section III, Groundwater Requirements, states "Section III is not applicable to this facility". We feel that this is an oversight, as when the DEP permit was issued there is the potential that they were not aware of the means of proposed treatment of runoff (infiltration), which we feel has the potential to degrade area groundwater quality, also potentially effecting area surface waters, and should therefore be monitored.

- The Dean Mead letter presents a "grandfathered" argument where the applicant references that this is not a new drainage project where the existing system has been in place for decades.
    - This point is not relevant, as the applicant is proposing new activities (composting) and have already altered the existing system with the ripping of the soil that provides for a more direct connection to groundwater (and therefore connection to the surface water system through migration of groundwater). Any significant modification to a permitted surface water system requires a permit or permit modification.

- The Dean Mead letter presents a dilution argument, stating that the runoff from these areas is small, and therefore should be considered insignificant when compared to the overall area.
    - This argument is flawed - the concern is the amount of raw biosolids that they intend to route the runoff from into V-ditches, to be treated via infiltration into the ground, and then the groundwater table, which is directly connected to the area surficial ditch system.

- Lastly, the Dean Mead letter states that the applicant is not adding additional nutrients to its property as they argue that there is a net reduction in moving from traditional fertilizers to applying biosolids, and that this delta offsets any potential increase that could occur from composting.
    - While we agree there is a potential reduction to be realized through the transition from traditional fertilizers to biosolids, we feel that there is significant risk to sensitive downstream ecosystems through the introduction of onsite biosolids composting, and potentially through the application of biosolids fertilizers as well.

Conclusions

CDM Smith believes the applicant has not provided reasonable assurance of compliance with the applicable SFWMD requirements for the approval of the proposed ERP modification. At a minimum, we believe the SFWMD should issue a third RAI requesting the applicant to provide additional information concerning the proposed Project to clarify the aforementioned issues. In addition, we would recommend the following:

(a) The system should be designed to prevent a direct connection between the stormwater in the biosolids composting areas and the groundwater (e.g., lined composting cells).

(b) The applicant should demonstrate that the proposed system will provide 100-year 72-hour design storm retention volume and storage recovery with full retention. The application materials to date have not provided any infiltration or system recovery analysis information.

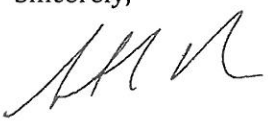
(c) It is imperative that the applicant develop and implement a surface and groundwater monitoring system to detect the potential migration of nutrients and other contaminants to offsite waters. The applicant's Project involves the construction of new facilities that have "high pollutant generating potential." As designed, the Project will discharge through the V-ditch to groundwater that drains into surface waters, which ultimately drain to impaired waters. The applicant has represented that the proposed Project will not degrade the water quality in the on-site canals or reservoir, or degrade the water

quality in any off-site waterbody, because all of the water in the composting cells will be retained. The monitoring plan should be designed and implemented to determine whether the proposed system actually performs as proposed.

The SFWMD should establish appropriate permit conditions that require the applicant to comply with the applicant's representations concerning the design, construction, operation, and maintenance of the proposed Project.

We appreciate the opportunity to provide comments on this Project. Please contact me at (954)-547-0149 if you have any questions or comments to discuss.

Sincerely,



Seth M. Nehrke, P.E., D.WRE

Principal Water Resources Engineer

CDM Smith

Cc: St Lucie County

Indian River County

ATTACHMENT C TO AFFIDAVIT OF SETH M. NEHRKE, P.E.

(CDM Smith letter dated April 18, 2019 to SFWMD)

CDM Smith

April 18, 2019

Gary R. Priest, P.E.
Okeechobee Regulatory Office
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Subject: Sunbreak Farms Biosolids Composting Cells
Application to Modify SFWMD ERP No. 56-00111-S
Response to SFWMD RAI #3

Dear Mr. Priest:

At the request of St Lucie County, CDM Smith Inc. reviewed the application and supporting materials (collectively, "Application") filed on June 13, 2018 by Sunbreak Farms for a modification of the South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP) No. 56-00111-S. After an initial review of the Application, the SFWMD issued a request for additional information ("RAI") on July 13, 2018. CDM Smith has reviewed this RAI, along with the RAI response package ("RAI Response") dated August 13, 2018 that was prepared by Sunbreak Farms. Subsequently, the SFWMD issued a second RAI on September 14, 2018. CDM Smith Inc. has reviewed this second RAI, along with the second RAI response package dated December 5, 2018 that was prepared by Sunbreak Farms. The SFWMD then issued a third RAI on January 11, 2019. CDM Smith Inc. has reviewed this third RAI, along with the third RAI response package dated April 1, 2019 that was prepared by Sunbreak Farms.

In its Application, Sunbreak Farms requests authorization to construct approximately 80 acres of Biosolids Composting Cells (the "Project") that will be used to receive and process biosolids from domestic wastewater treatment plants. The FDEP issued a "Domestic Wastewater Facility Permit" (No. FLA9799830) that describes the Project as a "new, Type I Biosolids Management Facility with a permitted Class AA compost production of approximately 80,000 dry tons per year." The Application states that vegetative waste will be mixed with biosolids in a 3:1 ratio to produce compost. Thus, the production of 80,000 dry tons per year of compost will require the delivery and management of approximately 20,000 dry tons per year of biosolids. The FDEP permit indicates the solids content of biosolids may range from 1.75% for liquid biosolids to 17.75% for dewatered "cake." If we conservatively calculate that the biosolids will have a solids content of 20%, we calculate the Project would receive at least 100,000 wet tons of biosolids each year, and each acre of the composting cells would receive at least 1,250 wet tons of biosolids each year.

Based on our review of the Application and the three RAI Responses, CDM Smith Inc. has concluded that the Application currently does not provide reasonable assurance of compliance with the applicable standards for the issuance of an ERP modification. For this reason, as set forth below in our conclusions, we recommend the SFWMD request additional information and clarification from Sunbreak concerning the proposed Project.

In addition to the items of concern outlined in our previous letters dated July 11, 2018, August 27, 2018, and December 27, 2018, we offer the following additional observations and questions with respect to the Project and the proposed stormwater management system:

RAI Item #1 – this RAI requested a geotechnical analysis or on-site pilot test to demonstrate that the proposed groundwater draw down methodology will work

Sunbreak Farms performed a water level draw down pilot study to show that they could hold the water approximately 3 ft below existing grade (required to hold it 1 ft below bottom of V-ditch which is 2 ft deep). We have the following comments:

- The analysis was performed in January & February, during the dry season when the groundwater table is already low.
- During the wet season the area groundwater levels are going to be higher. This raises several questions:
    - Are the pumps that move water from the ditches to the reservoir of sufficient size to keep up with the additional groundwater that will be present?
    - Are there temporal limits on when the farm can perform composting activities? If composting occurs during times of high groundwater then a demonstration needs to be made that the system is capable of performing under high area groundwater conditions.
- Simply depressing the groundwater does not alleviate the concern of pollutants/contaminants migrating into the groundwater and then offsite. It simply provides that there is capacity in the V-ditch to store runoff. Depressing the groundwater levels beneath the V-ditch will increase the rate of infiltration of runoff into the soil, but it does not limit the potential influx of pollutants/contaminants.
- Additionally, drawing the water table down in this manner can potentially induce legacy nutrients and other parameters out of the groundwater system (e.g., nutrients, pesticides, herbicides, and others).
- Also, while the reduced groundwater table increases the potential that some nutrients will be stored in the soil that would have previously entered the groundwater table, when groundwater levels are increased in composting conditions, the potential of remobilizing these nutrients is greater.
- Lastly, by drawing down the groundwater levels on Sunbreak Farms via the perimeter ditches there is the risk of unintentionally drawing down groundwater levels offsite. This could have potential adverse impacts on adjacent landowners' ability to beneficially use their own properties, and poses a potential risk to wetlands in the area.

It is recommended that if this methodology is approved by SFWMD, it would be appropriate to require monitoring of groundwater levels, and in the event that target groundwater levels are not maintained, composting activities must be promptly halted or secondary measures must be swiftly employed. This will provide some protection for when the measures proposed for groundwater protection are not sufficient.

RAI Item #2 – this RAI requested a demonstration that the existing reservoir complies with applicable criteria, and that the proposed stormwater management system will not result in adverse offsite impacts

A response was prepared by Dennis G. Corrick of Dean, Mead, Minton, and Zwemer, a law firm in Fort Pierce, FL. The assertation is made that no operational changes are proposed by the applicant other than the addition of "inside containment berms".

- The Dean Mead letter once again presents a "grandfathered" argument where the applicant references that this is not a new drainage project where the existing system has been in place for decades.

  This is not the case, since the applicant is proposing new activities (composting) and a modification to the associated stormwater management system to support these activities. The applicant has already altered the existing system with the "deep-ripping" of the soil that broke through some of the existing hard-pan aquiclude onsite and provides for a more direct connection to groundwater (and therefore connection to the area surface water system through migration of groundwater). Any significant modification to a permitted surface water system requires a permit or permit modification.

RAI Item #3 – this RAI requested an alternative to a water quality monitoring plan and reporting schedule

For this response the applicant's engineer, Engineering Design & Construction, Inc. (EDC), engaged Dean Mead, its attorneys, to develop a response. The response states that this is a repeat of question #3 from the previous RAI, and that they previously responded to this, and that they have nothing further to add.

The previous response was not sufficient, and the previously provided comments are still relevant, and are listed below for reference and convenience.

- The Dean Mead letter states the main concern is not the application of the biosolids fertilizer, but rather the actual act of composting – we would agree with this, however recent studies and impacts to receiving waters have brought into question the practice of land application of biosolids fertilizers in proximity to impaired waters or pathways to impaired waters.

- The Dean Mead letter states that nearly 90% of annual rainfall events (and the runoff) will be stored in the V-ditch, inside a containment berm.

  This water will be infiltrated via the V-ditches and into the groundwater table, which is directly connected to the area surficial ditch system.

- The Dean Mead letter states that the system does not discharge to surface waters.

  We know this is not always the case, as Sunbreak Farms discharges to the Minute Maid canal, and have done so within the past year.

- The Dean Mead letter states that the DEP permit establishes that the permitted activities do not warrant groundwater monitoring.

  The permit for Section III, Groundwater Requirements, states "Section III is not applicable to this facility". We feel that this is an oversight, as when the DEP permit was issued there is the potential that they were not aware of the means of proposed treatment of runoff (infiltration), which we feel has the potential to degrade area groundwater quality, also potentially effecting area surface waters, and should therefore be continuously monitored.

- The Dean Mead letter presents a "grandfathered" argument where the applicant references that this is not a new drainage project where the existing system has been in place for decades.

  This point is not relevant, as the applicant is proposing new activities (composting) and have already altered the existing system with the ripping of the soil that provides for a more direct connection to groundwater (and therefore connection to the surface water system through migration of groundwater). Any significant modification like this one to a permitted surface water system requires a permit or permit modification.

- The Dean Mead letter presents a dilution argument, stating that the runoff from these areas is small, and therefore should be considered insignificant when compared to the overall area.

  This argument does not properly consider that any increases in nutrient loads to the impaired Indian River Lagoon can contribute to adverse cumulative impacts. The concern is the amount of raw biosolids that the applicant intends to route the runoff from into V-ditches, to be treated via infiltration into the ground, and then the groundwater table, which is directly connected to the area surficial ditch system and could be transported via the canal system to the Indian River Lagoon.

- Lastly, the Dean Mead letter states that the applicant is not adding additional nutrients to its property as they argue that there is a net reduction in moving from traditional fertilizers to applying biosolids, and that this delta offsets any potential increase that could occur from composting.

  While we agree there is a potential reduction to be realized through the transition from traditional fertilizers to biosolids, we feel that there is significant risk to sensitive downstream ecosystems through the introduction of onsite biosolids composting.

Conclusions

CDM Smith Inc. believes the applicant has still not provided reasonable assurance of compliance with the applicable SFWMD requirements for the approval of the proposed ERP modification. At a minimum, we believe the SFWMD should issue a fourth RAI requesting the applicant to provide additional information concerning the proposed Project to clarify the issues, concerns and questions set forth above. In addition, our previous recommendations remain largely unchanged. We recommend the following:

(a) The system should be designed to prevent a direct connection between the stormwater in the biosolids composting areas and the groundwater (e.g., lined composting cells).

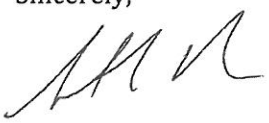
(b) The applicant should demonstrate that the proposed system will provide 100-year 72-hour design storm retention volume and storage recovery with full retention. The application materials to date have not provided any infiltration or system recovery analysis information.

(c) It is imperative that the applicant develop and implement a surface and groundwater monitoring system to detect the potential migration of nutrients and other contaminants to offsite waters. The applicant's Project involves the construction of new facilities that have "high pollutant generating potential." As designed, the Project will discharge through the V-ditch to groundwater that drains into surface waters, which ultimately drain to impaired waters (Indian River Lagoon). The applicant has represented that the proposed Project will not degrade the water quality in the on-site canals or reservoir, or degrade the water quality in any off-site waterbody, because all of the water in the composting cells will be retained. The monitoring plan should be designed and implemented to determine whether the proposed system actually performs as proposed.

The SFWMD should establish appropriate permit conditions that require the applicant to comply with the applicant's representations concerning the design, construction, operation, and maintenance of the proposed Project.

We appreciate the opportunity to provide comments on this Project. Please contact me at (954)-547-0149 if you have any questions or comments to discuss.

Sincerely,



Seth M. Nehrke, P.E., D.WRE

Principal Water Resources Engineer

CDM Smith Inc.

Cc: St Lucie County

Indian River County